

## CLAIMS

### WHAT IS CLAIMED IS:

1. A medical device, comprising:  
an elongated body; and  
5 a plurality of concave slots formed on the elongate body;  
wherein a surface of each concave slot is substantially flat in a first cross  
section and is substantially curved in a second cross section.
2. The medical device of claim 1, wherein the first cross section is perpendicular  
to the second cross section.
- 10 3. The medical device of claim 1, wherein the surface of at least one of the  
concave slots is substantially flat in a radial cross section of the medical device.
4. The medical device of claim 3, wherein the surface of at least one of the  
concave slots is substantially flat in an axial cross section of the medical device.
5. The medical device of claim 1, wherein the surface of at least one of the  
15 concave slots is substantially flat in a axial cross section of the medical device.
6. The medical device of claim 1, wherein the plurality of concave slots are  
formed in a stainless steel portion of the elongated body.
7. The medical device of claim 1, wherein the plurality of concave slots are  
formed in a plastic portion of the elongated body.
- 20 8. The medical device of claim 1, wherein the medical device is a needle.

9. The medical device of claim 8, wherein the first cross section is perpendicular to the second cross section.

10. The medical device of claim 8, wherein the surface of at least one of the concave slots is substantially flat in a radial cross section of the medical device.

5 11. The medical device of claim 8, wherein the surface of at least one of the concave slots is substantially flat in an axial cross section of the medical device.

12. The medical device of claim 1, wherein the medical device is a catheter.

13. The medical device of claim 12, wherein the first cross section is perpendicular to the second cross section.

10 14. The medical device of claim 12, wherein the surface of at least one of the concave slots is substantially flat in a radial cross section of the medical device.

15. The medical device of claim 12, wherein the surface of at least one of the concave slots is substantially flat in an axial cross section of the medical device.

15 16. The medical device of claim 1 further comprising a contoured surface on the elongate body, the plurality of concave slots being formed in the contoured surface, wherein each concave slot has a bottom surface that follows the contours of the contoured surface and curved side surfaces at each end of the bottom surface.

17. The medical device of claim 16, wherein the bottom surface is convex.

18. The medical device of claim 16, wherein the curved side surfaces are concave.

19. A medical device, comprising:  
a contoured surface having a plurality of concave slots formed thereon,  
wherein each concave slot has a bottom surface that follows the contours of the contoured  
surface and curved side surfaces at each end of the bottom surface.
- 5        20. The medical device of claim 19, wherein the bottom surface is convex.
21. The medical device of claim 19, wherein the curved side surfaces are concave.
22. The medical device of claim 20, wherein the curved side surfaces are concave.
23. The medical device of claim 19, wherein the contoured surface is made of  
stainless steel.
- 10       24. The medical device of claim 19, wherein the contoured surface is made of  
plastic.
25. The medical device of claim 19, wherein the medical device is a needle.
26. The medical device of claim 25, wherein the bottom surface is convex.
27. The medical device of claim 26, wherein the curved side surfaces are concave.
- 15       28. The medical device of claim 26, wherein the curved side surfaces are concave.
29. The medical device of claim 19, wherein the medical device is a catheter.
30. The medical device of claim 29, wherein the bottom surface is convex.
31. The medical device of claim 29, wherein the curved side surfaces are concave.

32. The medical device of claim 30, wherein the curved side surfaces are concave.

33. The medical device of claim 19 further comprising a plurality of concave slots formed on the contoured surface, wherein a surface of each concave slot is substantially flat in a first cross section and is substantially curved in a second cross section, the first cross section being perpendicular to the second cross section.

34. A medical instrument adapted to be inserted into a body, comprising:  
a surface having a plurality of concave slots formed thereon, wherein a surface of each concave slot is substantially straight in a first cross section and is substantially curved in a second cross section.

35. The medical device of claim 34, wherein the first cross section is perpendicular to the second cross section.

36. The medical device of claim 34, wherein the surface is made of stainless steel.

37. The medical device of claim 34, wherein the surface is made of plastic.

38. The medical device of claim 34, wherein the medical device is a needle.

39. The medical device of claim 34, wherein the medical device is a catheter.